NOTE XV.

CARCINOLOGICAL STUDIES IN THE LEYDEN MUSEUM.

BY

Dr. J. G. DE MAN.

N° 3.

1. *Neptunus diacanthus* Latr.

We received many specimens from Aruba, West-Indies, and from different localities of the West-African Coast, (Liberia, St. George d'Elmina, Congo), that all wholly agree with one another. I suppose *Neptunus marginatus* Alph. Milne Edwards (Archives du Musée, X, pag. 318) to be a mere variety of this species.

2. *Neptunus convexus* de Haan.

Confer: Fauna Japonica, Crustacea, pag. 9. (*Pontus convexus* n. sp.).

By comparing the original specimen of *Port.* (*Pontus*) *convexus* de Haan, collected by Mr. Macklot in the Molluccas, I found this species to be identical with *Neptunus Sieboldii* Alph. Milne Edwards, Archives du Musée, t. X., pag. 323, Pl. XXXV, fig. 5. — Though the description given by de Haan be very short, still his name must have the priority.

3. *Goniosoma annulatum* Fabr.

Confer: Alph. Milne Edwards, in: Archives du Musée, t. X, pag. 374.

The Museum collection contains six fine specimens (three adult males, three somewhat younger females) from the shores of the island of Amboina, that wholly agree with the quoted description. The distance of the last antero-lateral teeth from one another is in proportion to the length of the carapace as 6 : 4.

The frontal teeth are flattened and wholly resemble those of *Gonios. sexdentatum* Herbst, as described by me some time ago (Notes from the Leyden Museum, Vol. I, p. 59). In one adult male specimen the upper surface of the carapace and the upper surface of the hands and of the carpopodites and meropodites of the anterior legs is clothed with dense short hairs, but the other specimens are quite smooth. The upper surface of the carapace of our specimens (preserved in spirits) are marked with four spots, two larger pale ones on the branchial regions, and two smaller purplish red ones on the protogastrical lobes, in some small distance behind the front.

We received still an adult female specimen from the island of Nossy-Faly, near Madagascar, that presents some differences from the Amboina specimens. The last antero-lateral teeth are comparatively much smaller in this Nossy-Faly specimen and the frontal teeth are much narrower and separated from one another by much larger intervals. I regard it as a remarkable, perhaps local variety.

4. *Goniosoma dubium* Hoffmann.

Confer: Hoffmann, Recherches sur la Faune de Madagascar, etc. Leide 1874, pag. 11. — de Man, Notes from the Leyden Museum, I, pag. 60.

This species is undoubtedly identical with *Goniosoma orientale* Dana, as I have found by comparing our speci-

mens of *Gon. dubium* with the figure, given by Mr. Dana (Atlas, Pl. XVII, fig. 10). — Mr. Alph. Milne Edwards, when making his Monograph on the Portunidae, (Archives du Musée, t. X, p. 383), had no specimens of Dana's *Gonios. orientale* in his collection and therefore gives an inaccurate description of this species, by which Mr. Hoffmann has been led astray.

The first anterolateral tooth is but a little smaller than the third, but the second is rudimentary, and the last is not larger than the fifth. — Our specimens also wholly agree with the short diagnosis, given by Mr. Dana in his »Conspectus." — As I have mentioned already in my first note on this species, the individuals of our collection were found on the shores of the islands of Réunion and Timor.

5. *Goniosoma acutifrons* de Man.

Confer: de Man, in: Notes from the Leyden Museum, I, pag. 60.

This species, the locality of which has not been given up by me, was found on the shores of the island of Timor by Mr. Ludeking, anno 1864.

6. *Goniosoma erythrodactylum* Lam.

The Museum received a small female specimen, provided with eggs, from the shores of Djeddah, Red Sea. The distance of the last antero-lateral teeth is 33 m.m.

7. *Carupa laeviuscula* Heller.

Heller, Novara-Reise, pag. 27.

The Museum collection contains two specimens from the island of Timor and three from the shores of Djeddah,

Red sea, that wholly agree with one another. This species has been recorded by Mr. Heller from Tahiti, and is therefore distributed throughout the whole Indo-Pacific region. The figure given by Mr. Heller is rather incorrect, and our species is quite distinguished from Dana's *Carupa tenuipes* by the shape of the front and of the antero-lateral teeth.

8. *Lupocyclus rotundatus* Ad. and White.

Confer: Alph. Milne Edwards, Études zoolog. sur les Portuniens récents, in: Archives du Musée, X, pag. 387.

The Museum collection contains two beautiful male specimens, collected in the seas of Amboina by Mr. Ludeking.

The front is much prominent, and presents four depressed teeth, except the obtuse, litte prominent internal orbital angles: the two median teeth are more prominent than the two others. The upper surface of the front is minutely granular. The antero-lateral margin is armed with nine teeth, the external orbital angles included: five larger teeth, between which occur the four intermediate smaller ones; of the five larger teeth the first, viz. the external orbital angle is the largest, the four remaining are nearly similar to one another; the four intermediate teeth gradually decrease in size, the first, which is found immediately behind the external orbital angle, having the same size as the third of the five principal teeth, the fourth intermediate being scarcely perceptible. The surface of the sternum presents many rugosities. —

The arms of the chelipedes are much elongate; their upper surface is provided with many transverse granular rugosities, and with a granulated line near the posterior margin that terminates anteriorly into an acute spine on the border of the third and last fourth parts of the arm. Five acute spines occur on the anterior margin of the arm, gradually decreasing in size posteriorly. The wrist is armed with three spines, a larger one on the internal angle and two smaller ones

near one another on the external surface; the hand bears three spines, one a little beyond the middle of the internal margin of the upper surface, the two others on the external margin of it, one immediately near the articulation with the carpopodite, the other also somewhat beyond the middle. Also the wrists and hands bear many granular lines and transverse rugosities on their whole length.

The distance of the last antero-lateral teeth is 43 m.m., and the length of the carapace (front included) 37 m.m. The hands are 57 m.m. long.

9. *Geothelphusa Kuhlii* n. sp.

The Leyden Museum contains one female specimen of this species, collected at the island of Java by Mesrr. Kuhl and van Hasselt, more as half a century ago and still a female and male specimen from an unknown locality.

This species is most closely allied to *Geothelphusa Dehaanii* White from Japan and to *Geothelphusa obtusipes* Stimpson from the island of Ousima and seems to be the representative of these forms at the island of Java. Only by a close examination it is possible to recognize the differences between these forms, though I can only compare it with *G. Dehaanii* White, the species described by Stimpson wanting in the Museum.

As regards the shape and size of the carapace and the structure of the legs, our new species very closely resembles the Japanese *Geoth. Dehaanii* White, but *Geoth. Kuhlii* may be distinguished by the following characters. The front, being equally broad in both species, has its anterior margin slightly emarginated in the Java species, it being straight in *Geoth. Dehaanii* White. The orbits are comparatively much smaller in *Geoth. Kuhlii*, though having the same shape in both species. The whole upper surface of the carapace is minutely punctate, like also in *Geoth. Dehaanii*; the antero-lateral margin is granulate in the Japanese species, smooth in the other. The lateral

regions of the upper surface of the carapace are provided with many oblique depressed lines. The convex pterygostomian regions on the under surface are smooth in *Geoth. Dehaanii*, but provided with many short oblique rugose lines in the other. The outer surface of the external maxillipedes is coarsely punctate; the longitudinal depressed line, that occurs on the outer surface of the second joints, on which importance as a specific character Mr. Hilgendorf has directed the attention, in *Geoth. Dehaanii* runs in the *middle* of these joints, but in *Geoth. Kuhlii* is much more approximate to the internal margins; finally the third joints are more quadrangular in this new species, the antero-external angle much less pulling out.

The male abdomen has quite a different shape in both species; in *Geoth. Dehaanii* the lateral margins are straight or slightly convex, in the other form very concave on the contrary, so that the male abdomen of the Japanese form very much resembles that of *Telphusa Pealiana* Wood-Mason, that of *Geoth. Kuhlii* somewhat resembling that of *Paratelphusa spinigera* of the same author (Journal Asias. Soc. of Bengal, Vol. XL, 1871, Pl. II, fig. 4 and Pl. XIV, fig. 11).

As regards the anterior and ambulatory legs, they wholly resemble one another in both species, the dactylopodites also being wholly similar in these two forms, and therefore without any doubt different from those of *Geoth. obtusipes* Stimpson.

The greatest breadth of the carapace of a female individual of *Geoth. Kuhlii* is 31 m.m. [1]).

10. *Ocypode africana* de Man.

Confer: de Man, in: Notes from the Leyden Museum, Vol. III, pag. 253, (Octob. 1881), and Miers, on the

1) The Museum has still *three* other species of *Geothelphusa*, respectively from Java, Borneo, and an unknown locality, but I cannot describe them as new, the *Geothelphusa picta* v. Martens being too insufficiently known.

Species of *Ocypoda* in: Annals and Magazine of Natural History, for Novemb. 1882, pag. 386.

Mr. Miers in his recent Note on the species of *Ocypode* in the collection of the British Museum, regards my new *Ocypode africana* as doubtfully distinct from the Indian *Ocypode Kuhlii* de Haan and supposes it to be a mere variety of the latter. This doubt may have arisen from my not having compared these two very distinct species with one another: I only compared the african species with *Ocyp. cordimana* Latr. I did so, even because *Ocyp. africana extremely* resembles *Ocyp. cordimana*, whilst the former species *may be distinguished at first sight* from *Ocyp. Kuhlii* de Haan by the quite different shape of the carapace etc.

Ocyp. africana was described after a single male specimen from the Congo coast, presented by my cousin, Mr. P. Kamerman to the Museum. Now we lately received from him still eight specimens, collected at Muserra, Congo, whilst the Museum was enriched moreover by twenty specimens, that were collected at Grand Cape Mount, Liberia, by Mr. Büttikofer, among which also many beautiful adult females and males occur. I will therefore complete my former description and furthermore give up the differences of *Ocyp. africana* and *Ocyp. Kuhlii* de Haan. —

The females that we received, had a somewhat larger size than the males, but did for the rest wholly agree with them.

As regards the general shape of the upper surface of the carapace, the lateral margins are *much more convexly arched outwards* in *Ocyp. Kuhlii* than in *Ocyp. africana*, and the very acute external orbital angle extends much *beyond* the rounded prominence of the supraorbital margin, being directed *outwards* in the Indian *Ocyp. Kuhlii*, whilst it extends *only as far as* that prominence in the *Ocyp. africana*, being moreover directed *inward*. The front is *arcuated and enlarged anteriorly* in the Indian, *not enlarged*, but provided with convexly arched converging mar-

gins in the African species. — The antero-lateral margins are provided with small tubercles in *Ocyp. Kuhlii*, that are not seen in the other. The infra-orbital margin has a somewhat different course in both species, and the internal infra-orbital angle is provided with two or three small tubercles in *Ocyp. Kuhlii*, but not in *Ocyp. africana*. — The two granulated ridges of the first segment of the male sternum of *Kuhlii* are rather absent in the West-african species. The lateral regions of the upper surface of the carapace are somewhat more coarsely granulated in *Ocyp. Kuhlii*, than in the other form. The larger hand of the male is more *elongate* in *Kuhlii*, than in *africana*, like also the fingers: the musical ridge is composed out of some few (8 or 10) small ovoïd tubercles, arranged longitudinally, in the Indian form, but in *Ocyp. africana* it consists out of delicate transverse lines that become gradually narrower towards the upper part of the ridge, but do not change into tubercules. The under margin of the larger hand of the male is provided with acute tubercles in *Kuhlii*, that are much smaller in *africana*; also the upper and outer surface of the hands and the upper surface of the mobile finger is more coarsely granulated in *Kuhlii*, than in the other form.

The upper and under margins of the meropodites of the ambulatory legs are more coarsely granulated in *Kuhlii*, than in *africana* and the dactylopodites are *much more enlarged* in the Indian species.

These two species are therefore *quite different*, and it is only by Mr. Miers not having seen specimens of *Ocyp. africana*, that he has been led to suppose *Ocyp. Kuhlii* to be not specifically distinct from the species of the West-Coast of Africa.

Dimensions of a female of *Ocyp. africana* from Liberia:
Distance of the external orbital angles 33½ m.m.
Length of the carapace 29 m.m.
Length of the larger hand 27 m.m.
Height of the larger hand 15 m.m.

11. *Metopograpsus oceanicus* Hombron et Jacquinot.

Confer: Milne Edwards, Annales des Sciences Naturelles, 1853, pag. 166.

The Museum contains three specimens from Gebeh and three from Amboina.

12. *Metopograpsus quadridentatus* Stimpson.

Stimpson, in: Proceed. Acad. Natural Sciences of Philadelphia, April 1858, pag. 102.

The Museum received ten specimens, collected on the shores of Amoy, China, by Mr. G. Schlegel.

This species is most closely allied to the former, but may be distinguished by the following characters. The protogastrical lobes are much less prominent in this species than in *Metopogr. oceanicus* Hombr. et Jacquinot and the front less declivous. The internal suborbital angle is narrower and more acute in *oceanicus*, broader and more rounded in the other form. Finally the upper surface of the wrist, the upper surface of the palm and of the mobile finger is much more strongly granulated in *Metop. oceanicus*, than in *quadridentatus*. Also the oblique rugosities of the under surface of the palm are more pronounced in the species of the Astrolabe than in that, described by Mr. Stimpson.

For the rest, as regards the shape and the structure of the ambulatory legs, these two species wholly agree with one another. — The original specimens, described by Mr. Stimpson, were found on the shores of the Bay of Cumsing-moon near Hongkong, quite in the neighbourhood of the locality of our specimens. — Mr. Kingsley (Proc. Philadelphia, 1880, p. 191) is wrong in uniting this species with *Metop. oceanicus*.

13. *Pachygrapsus minutus* Alph. M. Edw.

Confer: Nouv. Archives du Musée, t. VIII, pag. 292, Pl. XIV, fig. 2.

Two specimens were collected in the Banda seas, both bearing a *Sacculina;* the distance of the external orbital angles is only 7 m.m.

14. *Grapsus maculatus* Catesby.

We received one specimen from Liberia (*Grapsus Webbii* Milne Edwards), five specimens from Djeddah, Red Sea, (*Grapsus Pharaonis* Milne Edwards), and three from Réunion. The Liberia individual almost wholly agrees with those from the shores of Djeddah, but in the former the protogastrical lobes are somewhat less prominent and the whole upper surface of the carapace and of the ambulatory legs is marked by innumerable very small yellow spots. Also Alph. Milne Edwards already has united these different forms under the common name of *Grapsus maculatus* Catesby, regarding them as as many varieties. — (Nouvelles Archives du Musée, T. IX p. 285).

15. *Grapsus gracilipes* Milne Edwards.

The Museum contains a fine male specimen, from Amboina, that almost wholly agrees with the above mentioned specimens of *Grapsus maculatus, var. Pharaonis* from the Red Sea, *but differs by the several joints of the ambulatory legs being much more slender;* the upper surface of the carapace and of the ambulatory legs is marked by irregular yellow spots, that are not so numerous as in *Grapsus maculatus, var. Webbii.* I am inclined to regard this form as a new variety of *Grapsus maculatus*, Catesby and perhaps *Grapsus gracilipes* Milne Edwards (Annales des Scienc. Natur. 1853, p. 168) will appear to be identical with it.

This specimen bore a fine Bopyride in its visceral cavity.

16. *Hypsilograpsus Deldeni* de Man.

This. interesting form, described by me in the Notes from the Leyden Museum, Vol. I, pag. 72, 73, April

1879, seems to be identical with *Pyxidognathus granulosus*, described without a figure by Mr. Alph. Milne Edwards as a new genus and species of crustaceans in: Bulletin de la Société philomathique de Paris, of its session of 18 Dec. 1878 [1]). I suppose this, having had the occasion of comparing with our specimen the original drawing of *Pyxid. granulosus*, which Mr. Alph. Milne Edwards kindly presented me. When these two forms would be identical, then the name of *Pyxidognathus granulosus* must have the priority, being published two or three months before mine. — The specimen of the French carcinologist was found at the island of *Ovalau* in fresh or sligthly brackish water, the specimen of *Hypsilograpsus Deldeni* being collected near Menado at the island of Celebes.

17. *Grapsodes notatus* Heller.

Heller, Novara-Reise, 1865, p. 58, 59. Taf. V, fig. 2.

A single fine male specimen is in the Museum Collection found on the shores of the island of Morotai by Mr. Bernstein. It is of a somewhat larger size than the individual of the Novara Expedition, that was collected at the Nicobare islands, but agrees for the rest wholly with it. The anterior part of the carapace is much declivous and convex, and some very small tubercles follow immediately behind

1) This note of Mr. Alph. Milne Edwards, entitled: „Description de quelques Crustacés nouveaux," has not yet been announced in the Zoological Record, neither for 1878, or 1879, nor 1880, and it may therefore be allowed to direct the attention of carcinologists to it by quoting the new forms described: *Goniothorax ruber*, nov. genus, nov. spec. from Madagascar, allied to *Epialtus*, *Acanthonyx* and *Peltinia*; *Eumedon pentagonus* nov. sp. from the Mauritius, *Platyxanthus crenulatus* and *Patagonicus* novae spec. from Patagonia; *Rhabdonotus pictus* nov. gen. nov. spec. from Cochinchina, allied to *Trapezia* and *Cymo*; *Pyxidognathus granulosus* nov. gen. nov. spec. from Ovalau, allied to *Gnathograpsus*; *Axia acantha* nov. spec. from New-Caledonia, *Callianassa Filholi* nov. spec. from Stewart island; finally some remarks on fossil forms: *Palaeoplax*, new genus for *Gonoplax incerta*, description of *Macrophthalmus aquensis* Marion, *Lithophylax Trigeri* nov. gen. nov. spec. from Maine, allied to *Gonoplax*.

the posterior antero-lateral teeth on the postero-lateral margins, but the postero-lateral regions are for the rest quite smooth, without squamiform rugosities, as are described by Mr. Heller.

Dimensions of our Morotaï specimen:

Length of the carapace: 21 m.m.

Greatest Breadth (near the middle of the length): 24 m.m.

Breadth of the front: 8 m.m.

Distance of the external orbital teeth: 15 m.m.

18. *Ptychognathus pusillus* Heller.

Ptychognathus pusillus, Heller, Novara-Reise, pag. 60—61.

A single male specimen is in the Museum Collection, collected by Mesrr. Pollen and van Dam at the Bay of Pasandava, Madagascar. The original specimen of Mr. Heller was found at the Nicobare islands. The external maxillipedes wholly agree with those of *Ptychognathus intermedius* de Man, described as a *Gnathograpsus*, but our species is soon distinguished by its smaller size and the acute spine on the inner angle of the wrist of the chelipedes. — This species has not been described by Mr. Hoffmann in his treatise on the Crustacea of Madagascar, collected by Mesrr. Pollen and van Dam. Mr. Kingsley (Proc. Acad. Nat. Sciences of Philadelphia, 1880, p. 204) acts wrong when regarding this form identical with *Gnathograpsus barbatus* Alph. M. Edw. and describing it under that name.

19. *Sesarma angolensis* Brito Capello.

Confer: Brito Capello, Descripção de tres especies novas de Crustaceos da Africa occidental. Lisboa 1864, p. 4, 5. Fig. 2.

Seven fine specimens (4 ♂, 3 ♀) were collected by Mr. Büttikofer at Grand Cape Mount, Liberia, in 1881, wholly agreeing with the quoted description and figure, except as regards the shape of the male hands, — presenting therefore a

remarkable variety, perhaps a local one. It will be allowed to give a description of the chelipedes of the male. The internal surface of the arm is smooth and provided with two rows of hairs, the under surface also is smooth, but the somewhat convex outer surface has many small transverse rugosities; the arched inferior margin presents a series of many small acute teeth, the rugose upper margin ends into an acute tubercle, and the external margin has many small granules. The convex upper surface of the wrist presents many transverse rugosities. The large, much compressed hands are equally shaped on both sides, and differ in many regards from the figure (2_c) given by Mr. Brito Capello: the upper margin of the palm is comparatively shorter and the mobile finger on the contrary much longer than in the specimens from Angola; this mobile finger is strongly arched and presents a somewhat granular acute upper margin, its external surface being smooth and a little punctate, except the distal end that is a little granular; the immobile finger is higher than in the type and its tip is not so slender as in the quoted figure and, like that of the mobile finger, imperfectly excavated spoon-like; the upper margin of the immobile finger shows a large tooth that is divided into four small teeth, on its proximal half, and some small teeth on the distal half. The external surface of the palm is convex, that of the immobile finger more flattened; the whole external surface is a little punctate but for the rest smooth, except the somewhat granular tip. The convex inner surface of the palm shows many scattered granules, that are found also near the upper margin of the internal surface of the immobile finger; the internal surface of the mobile finger being also granular.

The hands of the female are much smaller and otherwise shaped; the mobile finger being nearly straight and the immobile less high.

The terminal somite of the female abdomen is not included by the preceding, sothat this species presents some-

what affinities to the subgenus *Metagrapsus*, while it agrees with the subgenus *Holometopus* by the straight, nearly undivided upper margin of the front.

Distance of the external orbital angles of a male specimen 36 m.m., length of the carapace being 30 m.m. —

Length of the inferior margin of the hands of this same specimen 32 m.m., Height of the hand 19 m.m.

20. *Sesarma Büttikoferi* n. sp.

A species at first sight distinguished by the characteristical shape of the hands.

Male. The carapace is *quadrilateral* in outline, a little broader than long. The dorsal surface is flat in the middle and posteriorly, but somewhat convex in front and along the sides. The protogastric lobes are divided, for a very short distance anteriorly, into four nearly equal little prominent lobules and are limited next the orbits by rather shallow depressions, which extend to the antero-lateral angle of the carapace. The anterior half of the upper surface of the protogastric lobes is marked with small rugose granules, a rugose transverse line occurring between these granules at some distance behind the two lateral lobes; the mesogastric lobe extends forward, in the median sulcus between the protogastric lobes, nearly to the front. The hepatic and branchial regions are traversed by sharp oblique plications. Some parts of the posterior half of the surface of the carapace is very minutely punctate. The front is a little broader than half the distance of the external orbital angles, perpendicular and low and the inferior margin is broken by a broad excavation in the middle; its concave surface is minutely granulated, some larger granules occurring near the upper margin. The *lateral margins of the carapace are entire* and the antero-lateral tooth (the external orbital angle) projects well forward.

The cephalothorax is not thick and its under surface (the abdomen included) is smooth.

The smooth concave internal surface of the trilateral

arms of the anterior legs is provided with two rows of hairs; the under surface also is smooth, but the somewhat convex outer surface is marked with many transverse rugosities. The acute inferior margin presents many acute small teeth, the two other margins being provided with acute granulations. The convex rhomboid upper surface of the wrist is marked with numerous oblique rugosities. The large very characteristical hands are equal on both sides and *very compressed*; the palm projects much outwardly beyond the carpus and the dactyli are comparatively short; *the whole outer surface of the hand (the immobile finger included) is remarkably flattened, quite smooth and bright* like a looking-glass, though a little punctate (when seen by a magnifying glass); the inner surface of the hands on the contrary is convex and covered with scattered granules; the external angle of the outer surface is rounded, the upper margin sinuous, the under margin nearly straight and presenting some few minute granules, that occur also on the outer surface of the immobile finger; the mobile finger makes an oblique angle with the upper margin and its upper and inner surface is granulated; the internal margins of the dactyli present some small teeth and the horny tips are slightly excavated.

The upper margin of the scarcely enlarged meropodites of the ambulatory legs terminates into a strong spine, and the propodites and dactylopodites are clothed with a few short, stiff hairs along the margins.

The specimen is of a chestnut colour and was found by Mr. Büttikofer at Fisherman lake, Liberia, Januari 1881.

Length of carapace: 11 m.m.

Breadth at orbital angles: $13^1/_2$ m.m.

Breadth of the posterior margin: $6^1/_2$ m.m.

Breadth of front: 8 m.m.

Height of front: $1^1/_2$ m.m.

Length of the hands: 13 m.m.

Height of the hands near the articulation of the mobile finger: $5^1/_2$ m.m.

21. *Sesarma Kamermani.* n. sp.

A single male specimen of this species was presented in 1879, to our Museum by my cousin Mr. P. Kamerman, Officer of the Dutch Commercial Company on the Congo Coast, who already sent many interesting collections to this establishment: — it was found at Muserra. — This new form is closely allied to *Ses. africana* Milne Edwards from Senegambia, Liberia and the Gold Coast and to the Indian *Ses. rotundifrons* Alph. Milne Edwards, but may be distinguished at first sight by the shape of the outer surface of the hands.

The cephalothorax is as thick as in *Ses. africana* and agrees with it in its general shape, but the carapace is comparatively a little broader and also somewhat more convex: in *Ses. africana* the ratio of the distance of the external orbital angles in relation to the length of the carapace is as 67: 64, whilst in our new species that ratio is 67: 59. — The protogastrical lobes project a little less forward than in the species described by Mr. Milne Edwards before almost half a century, and the surface of the carapace has quite the same physiognomy as in that species, being also clothed with small transverse tufts of hair and the lateral margins presenting, besides the acute external angular teeth, also a second acute epibranchial tooth and a trace of a third one.

The meropodites and carpopodites of the chelipedes are quite shaped as in *Ses. africana*, *but the external surface of the hands is characteristical for Ses. Kamermani.* In *africana* that surface is *equally* convexly arched, but in the new species the surface of the palm rises *to an acute tubercle*, situated near the external inferior angle of it, that angle being convexly rounded.

The rest of the surface of the palm from the tip of that tubercle to the ends of the dactyli is remarkably flattened, the external surface of the dactyli being also flattened. The external surface of the hands presents the same granulation as in *Ses. africana.* The ambulatory legs

wholly agree in both species. Distance of the external orbital angles: 29 $^1/_2$ m.m.

Length of the carapace: 26 mm.

Length of the hands: 27 m.m.

22. *Sesarma indica* Milne Edwards.

Sesarma indica, Milne Edwards, Histoire Naturelle des Crustacés, Tome II, pag. 74. (1837), and Annales Scienc. Naturelles, III Série, Tome XX^{ième} (1853), p. 186, 187. Nec *Sesarma indica*, Heller, Novara-Reise, pag. 64, 65.

It is much to be regretted, that many of the descriptions given by Mr. H. Milne Edwards both in the „Histoire naturelle," and in the »Annales des Sciences naturelles," are very short sothat it is nearly impossible to recognize the species that are described by him.

To these imperfectly known species also belongs the *Sesarma indica* Milne Edwards, though already described before almost half a century. — In his »Novara-Reise," Prof. Heller has identificated a crab from Ceylon and the Nicobares with this *Sesarma*, but as I believe, very unjustly, for his crab rather appears to me to belong to one of the species of the subgenus *Metagrapsus*.

I therefore venture to give a new description of the *Sesarma indica* Milne Edwards, based upon the investigation of three individuals in our Museum (2 ♀, 1 ♂), one female being found at the Isle of Sinkel by Mr. D. P. Jentink, the other two specimens being from an unknown locality, though in every case also from the Indo-Malayan Seas.

The quadrangular surface of the rather thick cephalothorax is much convex longitudinally, like also somewhat laterally; it is broader than long, the ratio of the distance of the external orbital teeth to the length of the carapace being as 10: 9. The protogastrical lobes are separated by rather deep smooth grooves, the middle one being also very broad; the two internal protogastrical

lobes are broader than the external, that are separated from the hepatic regions by a rather shallow depression. The mesogastrical lobe is also marked by a rather deep sulcus, and extends for some distance into the median groove that separates the two internal protogastrical lobes; the front is perpendicular and low, and the inferior margin has a sinuous edge as seen from above, with a narrow but deep sinus in the middle and a very slight one on each side. The lateral margins are scarcely arched and armed with *three* teeth (including the acute external orbital angle), that gradually diminish in size backwards. The posterior cardiac lobe is triangular and nearly smooth, but the whole surface of the carapace is covered with small tufts of hair, that are larger on the anterior halt but diminish gradually posteriorly and are not found on the grooves that separate the various lobes, the branchial regions presenting many oblique hairy lines. The under surface of the cephalothorax is smooth, and the terminal somite of the female abdomen is *wholly included* by the preceding, whilst the lateral margins of the male abdomen are sinuous.

The chelipedes are of equal size both in the male and the female; they are even almost equally shaped in both sexes, but the mobile finger of the female is a little less arched than that of the male.

The concave smooth internal surface of the arm presents two longitudinal rows of hairs, a stronger anterior and a smaller posterior one. The under surface is quite smooth and the convex external surface presents many transverse rugosities. The under margin presents many small teeth, the upper margin terminates into a short spine and the external margin also is minutely denticulate. The upper surface of the wrist is rugose and convex, has a denticulate anterior margin and a larger spine at the antero-internal angle; its convex inner surface presents an acute tubercle. The convex outer surface of the hands is somewhat rugose or granular, especially at the inferior part;

the upper margin of the palm is marked by a somewhat prominent line, which terminates anteriorly above the articulation of the mobile finger into a small spine, two smaller oblique lines parting from it inwardly; the fingers are a little longer than the palm, smooth and a little punctate; the mobile finger a little arched, its upper margin presenting in both sexes a series of eleven or twelve small acute tubercles directed forward, the inner margins present some small denticulations and the fingers have horny and somewhat excavated tips. The convex inner surface of the hands is granulated, but has *no* trace of a granulated crest or ridge.

The ambulatory legs are short, with the meropodites scarcely enlarged, their upper margin terminating anteriorly into a spine, their upper surface being a little rugose. The propodites are hairy along the edges, and the dactylopodites are very elongate and compressed, acuminate and a little arched with hairy margins.

	Male.	Female.
Distance of the external orbital angles:	25 m.m.	30 m.m.
Length of the carapace :	22 m.m.	27 m.m.
Length of the hands :	24 m.m.	30 m.m.

23. *Plagusia depressa* Say.

Confer: Miers, On the Plagusiinae, in: Annals and Magazine of Natural History for February 1878, p. 149.

This species inhabits, according to Mr. Miers, the so called Atlantic region, the closely allied *Plagusia tuberculata* Lam. being distributed throughout the whole Indo-Pacific region. Now the Museum-collection contains, besides many specimens of *Plagusia depressa* Say from Liberia, Saccondi, Boutry, Acra d'Elmina and South America, also a fine female individual from the shores of the island of Amboina, presented by Mr. Hoedt, in 1864. This specimen *wholly* agrees with the individuals from the West-Coast of Africa, so that this form has a much larger geo-

graphical range. The Museum contains also four specimens of *Plag. tuberculata* Lam. from the Sanghir Islands, which differ from the specimens of *depressa* Say only *by the tubercles of the carapace being much more depressed.* The other characters, quoted by Mr. Miers, by which these two forms may be distinguished, are of no importance, for allmost all our specimens of the West-African *depressa* Say have the lobe above the bases of the second and third ambulatory legs *not* dentated, and the terminal segment of the postabdomen in the male of a Liberia specimen is broadly semioval, that of a Sanghir individual of *tuberculata* Lam. being narrower, with the sides more distinctly convergent.

Leyden, Febr. 1883.